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**A Scaling for Differential Single and Multiple Ionization of Kr by Electron Impact** O.G. DE LUCIO, J. GAVIN, R.D. DUBOIS, University of Missouri-Rolla, Rolla, MO 65409 — Differential measurements of Kr ionization by electron impact were performed for an electron beam of 240 eV and 500 eV energies, colliding with a Kr gas jet target. Results for absolute doubly differential cross sections (DDCS) of  $\text{Kr}^+$ ,  $\text{Kr}^{2+}$  and  $\text{Kr}^{3+}$  ionization states are presented. Kr ions are pulled out of the interaction region by means of a pulsed field and recorded by means of a channeltron detector used in coincidence with a projectile detector in order to acquire differential information. DDCS plotted as a function of projectile energy loss and momentum transfer were investigated, some similarities were observed but in general no “universal curves” were found. By using a “reduced momentum” the DDCS for different angles, energy losses and even for different projectile energies could be compressed into two curves, corresponding to large ( $90^\circ \geq \theta \geq 30^\circ$ ) and small ( $\theta < 30^\circ$ ) scattering angles. These different scalings and variables will be presented and discussed.

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